

Attorney Docket No. 102412-108
U.S. Serial No. 10/529,017
Page 6 of 8

REMARKS

In the present Office Action, claims 1-13 were examined. Claims 14-25 are subject to restriction or election. Claims 1-10 and 12-13 are rejected and claim 11 is objected to. No claims are presently allowed.

By this Amendment, claims 1 and 11 have been amended and claims 14-25 have been canceled. No new claims have been added. Accordingly, claims 1-13 are presented for further examination. No new matter has been added. By this Amendment, claims 1-13 are believed to be in condition for allowance.

Explanation of Above Amendments

Claim 1 has been amended to add the word "and" between the third and fourth elements of the claim. Claim 11 has been re-written in independent form and includes the limitations of independent claim 1 and intervening claim 10 from which claim 11 depends.

In an Office Action mailed August 16, 2006, the Examiner requested restriction between the claims of Group I (claims 1-13) and the claims of Group II (claims 14-25). Applicants elected the claims of Group I and traversed the restriction requirement in a paper filed September 20, 2006. The Examiner has now repeated the restriction requirement and made it Final. Accordingly, Applicants now cancel claims 14-25 drawn to non-elected Group II.

Rejections under 35 USC §102

The Examiner rejected claim 1, 4-8 and 12-13 under 35 U.S.C. §102(b) as being anticipated by Shim et al. (US Patent No. 6,534,859). Applicants respectfully traverse this rejection for the following reasons.

Applicants' invention as embodied in claim 1 and as illustrated, for example, in Fig. 4 is drawn to a semiconductor package where a heat spreader has a peripheral edge 32 that is aligned with both a peripheral edge 36 of a molding resin and a peripheral edge 34 of a substrate. The peripheral edge of the heat spreader is not recessed from the peripheral edge of the other two

Attorney Docket No. 102412-108
U.S. Serial No. 10/529,017
Page 7 of 8

components. Alignment is achieved by cutting through the heat spreader, molding resin and substrate such as along cut line 28 of Fig. 3. Since alignment is achieved by cutting, the peripheral edges of all three features, heat spreader, molding resin and substrate have a surface finish commensurate with having been cut.

As illustrated in reference Fig. 4, the package disclosed in US 6,534,859 has an external mold cap 56 applied to a substrate 40. A heat spreader 60 is supported by an interior wall of the mold cap. As a result, the peripheral edge of the substrate extends beyond the peripheral edge of the molding resin and the peripheral edge of the molding resin extends beyond the peripheral edge of the heat spreader. As such, the peripheral edge of the reference heat spreader is recessed from the associated peripheral edges the substrate and molding resin, a direct teaching away from the invention embodied in Applicants' claims.

There is nothing in US 6,534,859 to teach or suggest a package where all three of the substrate, heat spreader and molding resin have aligned peripheral edges. Further, there is nothing in US 6,534,859 to teach or suggest that these aligned peripheral edges have a surface commensurate with having been cut. Applicants' claim 1 and the claims dependent therefrom should be allowed over the Shim et al. patent.

Applicants' claims 2, 3, 9 and 10 were rejected under 35 USC 103(a) as unpatentable over the combination of Shum et al. with one or more of Djennas et al. (US Patent No. 5,734,201), Asano et al. (US Patent No. 5,929,516), Maslako et al. (US Patent No. 5,483,740) and Going et al. (US Patent No. 6,271,570). Each one of claim 2, 3, 9 and 10 depends from and further limits and defines claim 1. As claim 1 is believed to be in condition for allowance, these dependent claims should likewise be allowed.

Claim 11 was objected to as being dependent on a rejected base claim. The Examiner indicated that claim 11 would be allowed if rewritten in independent form to include all the limitations of the base claim and any intervening claims. Claim 11 has been so rewritten and should now be allowed.

Attorney Docket No. 102412-108
U.S. Serial No. 10/529,017
Page 8 of 8

Accordingly, Applicants submit that none of the references, alone or in combination, anticipate or make obvious the invention as presently claimed and that the application is now in condition for allowance. Therefore, Applicants respectfully request reconsideration and further examination of the application and the Examiner is respectfully requested to take such proper actions so that a patent will issue herefrom as soon as possible.

If the Examiner has any questions or believes that a discussion with Applicants' attorney would expedite prosecution, the Examiner is invited and encouraged to contact the undersigned at the telephone number below.

Please apply any credits or charge any deficiencies to our Deposit Account No. 23-1665.

Respectfully submitted,
Daniel K. Lau, et al.



Gregory S. Rosenblatt
Reg. No. 32,489

Date: January 29, 2007

CONTACT INFORMATION:
WIGGIN & DANA LLP
One Century Tower
New Haven, CT 06508-1832
Telephone: (203) 498-4566
Facsimile: (203) 782-2889
Email: grosenblatt@wiggin.com

116832\51630105.1